

**CONTROL CHANNEL FOR AN OPTICAL COMMUNICATIONS SYSTEM**  
**UTILIZING FREQUENCY DIVISION MULTIPLEXING**

**ABSTRACT OF THE DISCLOSURE**

Overhead information is transmitted from a first node to a second node in an optical fiber communications system using a separate frequency band. A control channel containing the overhead information is frequency division multiplexed with electrical low-speed channels to form an electrical high-speed channel, which is converted from electrical to optical form to form an optical high-speed channel. The optical high-speed channel is transmitted over the optical fiber to the second node. In one embodiment, the control channel has a narrow bandwidth and/or is located at lower frequencies than the electrical low-speed channels, thus making the control channel more robust to impairments in the optical fiber.